



NATIONAL OPEN UNIVERSITY OF NIGERIA
PLOT 91, CADASTRAL ZONE, NNAMDI AZIKIWE EXPRESSWAY, JABI, ABUJA
FACULTY OF MANAGEMENT SCIENCES
2023_2 EXAMINATIONS_

CREDIT UNIT: 3

COURSE CODE: MBA816

COURSE TITLE: Quantitative Methods for Management

TIME ALLOWED: 2½Hrs

INSTRUCTION: 1. Attempt question number one (1) and any other (3) questions.
2. Question number 1 carries 25 marks, while the other three (3) questions carry 15 marks each.
3. Present all your points in coherent and orderly manner.

1a. Simplify $3\sqrt{50} - 5\sqrt{32} + 4\sqrt{8}$ 10marks

b. Solve the following fractions with bracket $\frac{3}{8}(y + 7) + \frac{5}{6}(2y - 3)$ 10marks

c. Explain the Term Ratio 5marks

2a. In a market, $2\frac{1}{4}$ kg. of coffee cost N1.75. What quantity of coffee can be bought for N1.55 in the market? 6marks

b. The electrical resistance of a wire varies inversely as the square of its radius. Given that the resistance is 0.4 ohms when the radius is 0.3cm, find the resistance when radius is 0.45cm. 9marks

3a. Discuss problem of data collection method in statistics. 6marks

b. Taiwo and Kehinde are to share N60 such that Kehinde has N12 less than Emma. Find the share of each person. 9marks

4a. Find the sum of the first 28 terms of an arithmetic progression whose series is given as $3 + 10 + 17 + \dots + n$ 5marks

b. A pure water company awarded contracts to various contractors for constructing a factory house as follows. 10marks

Carpenter 25,000

Bricklayer 20,000

Painter 5,000

Decorator 10,000

Total 60,000

Represent the above information on a pie chart.

5a. Find which term is 383 from the following series, $5 + 8 + 11 + \dots + n$. **10marks**

b. Dadogo Nig Ltd water wants to increase its water rate of 80k in the ratio 8:5. Determine the new water rate. **5marks**